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| **Halifax County Schools Elementary School Lesson Plan** | | | | | | | | |
| Subject: MATH | **Teacher:** | | | **Grade Level: Second Grade** | | **Date(s): September 5-9, 2016** | | |
| **Content :**  Common Core Standards & Essential Standards | **2.OA.1.** Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.  **2.OA.2.** Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers.  **2.NBT.9** Explain why addition and subtraction strategies work, using place value and the properties of operations. (Note: Explanations may be supported by drawings or objects.) | | | | **Can Statements /Learning Targets** (I can……..)  I can add to solve one-step or two step word problems using drawings and/or equations.  I can subtract to solve one-step or two step word problems using drawings and/or equations  I can explain what strategy I used to solve my problem. | | | |
| Essential Question(s): (What question(s) should students be able to answer at the end of the lesson/unit?) | What strategy did you use to solve the word problems? Why does it work?  What strategy did you use to find the sum or difference? Why does it work? | | | | **Standard for Mathematical Practice:**  ***1. Makes sense and perseveres in solving problems.***  ***2. Reasons abstractly and quantitatively.***  ***3. Constructs viable arguments and critiques the reasoning of others***.  ***4. Models with mathematics.***  5. Uses appropriate tools strategically.  6. Attends to precision.  7. Looks for and makes use of structure.  ***8. Looks for and expresses regularity in repeated reasoning.*** | | | |
| **Technology Connection:**  <http://www.ixl.com/math/grade-2/addition-word-problems-up-to-two-digits>  <http://www.ixl.com/math/grade-2/subtraction-word-problems-up-to-two-digits>  <http://www.ixl.com/math/grade-2/write-addition-sentences-to-describe-pictures-sums-to-20>  <http://www.ixl.com/math/grade-2/write-subtraction-sentences-to-describe-pictures-up-to-18> | | | |
| **Vocabulary:**  Academic/Content | equation, sum, difference, add, subtract, symbol, addend, subtrahend, minuend, unknown, combine, put together, take apart, compare  addition, subtraction, mental math, strategy, sum, difference, digit, count-on, count-back, part, total, pattern, digit, models, associative property, commutative property, identity property, hundreds, tens, ones, counting on, facts of 10, doubles plus/minus 1, fact families | | | | **Literature Connection:**  Mall Mania – Stuart J. Murphy  Jack the Builder – Stuart J. Murphy  How Many Feet in a Bed – Diane Johnston Hamm  Sitting Down to Eat – Bill Harley  Mission: Addition – Loreen Leedy (**Short stories with word problems!)** | | | |
| **Materials Needed:** | * Counting on Cards * Lunch bags with counters * Number cards 1 – 9 * Hundreds boards | * Pictures of math doubles * Doubles poem on chart paper or Smartboard * Number lines | | | * Commutative/Associative property anchor charts for classroom * Student timers for math fluency * Math Mountain Cards | | | |
| **Center Rotation Activities** | **Math with Teacher**  Review graphing. Have group create a picture graph or bar graph with a given set of data. | **Math Fluency**  Because of math fluency in the tech center, this center will be reading about math. Choose from the list above or use books connected to the review skills for the week. | | | **Technology**  <http://www.softschools.com/math/games/mad_minute_math/>  This is an online timed game to see how many addition facts can be completed correctly in 1 minute. | | | **Writing About Math**  Choose an addition number sentence, such as 8 + 2 = 10. Then challenge your students to write or tell a story that describes the number sentence. You can provide a model, such as “Once upon a time there were 8 mice who lived in a forest. One day, 2 mice from the city came to visit. All the mice had a picnic together. The 10 mice had fun playing.” Encourage your students to be creative. You may wish to have small groups or pairs create a story together. |
| **Monday**  **Subject Integration:** | **Whole Group**  **Review**: Math Mountains (fact families). As math warm-up, have them choose a math mountain card from the board and complete it in their math journals.  **Counting On:**  Read “Sitting Down to Eat”. Ask students to tell what is happening in the story (always one more coming to dinner). Let them know we use the strategy of counting up when we are adding 1,2 or 3. Demonstrate how you start with the largest number and “count on”! Model for the students how to count on using the number line. Have sample numbers lines that begin with different numbers on them. Have students add 1, 2 or 3 and show where they would end up on the number line. Try students with larger numbers! (e.g., 39, 57, 73 plus 1, 2 or 3)  Give each small group a lunch bag. Have one student put counters inside the bag and write the number on the front of the bag. Then have him or her present 1, 2, or 3 additional counters. Have other students add to find the sum. The bag prevents students from counting each item one by one. Have group members work together to find the sum. You may want to provide number lines or hundred charts to help students add. Then have students swap roles until everyone has had a chance to put counters into the bag. | | | | | | **Assessment (formative/summative)**  <http://commoncoretasks.wikispaces.com/> | |
| **Tuesday**  **Subject Integration:** | **Whole Group**  Doubles Facts (Doubles Plus One/Two):  Review doubles facts by connecting to visual clues that represent double facts to 10. Show these pictures and have volunteers guess which doubles fact the picture showing. http://upload.wikimedia.org/wikipedia/commons/thumb/5/5e/Small_arrow_pointing_left.svg/293px-Small_arrow_pointing_left.svg.png  Doubles neighbors are the numbers that sit right next to doubles, so kids can start by adding doubles, then adjust one up or down. Ex: For the addition double 4+4, you'll have neighbor doubles 5+4, 3+4, 4+3 and 4+5. Help kids recognize when addition facts are "next door neighbors", they are just one number apart from one another. The memory rule here should be:  **"When numbers are neighbors, get doubles to help."** | | | | | | **Assessment (formative/summative)**  <http://commoncoretasks.wikispaces.com/>  **Picture Ideas of Doubles**  1+1 two eyes.  2+2 a four leaf clover.  3+3 two triangles or a six-pack of soda.  4+4 a spider.  5+5 two hands.  6+6 an open egg carton.  7+7 two weeks on a calendar.  8+8 two spiders.  9+9 two tic-tac-toe boards.  10+10 ten fingers and ten toes | |
| **Wednesday**  **Subject Integration:** | **Whole Group**  Doubles Facts (Doubles Plus One/Two):  Review doubles facts by reading the poem at the right. Review the lesson on how neighboring numbers mean add the doubles + 1: (4 + 5 = 4 +4 + 1). Have several examples on the board. Have students demonstrate which double they see in the problem. Give elbow partners a math problem. Have them share with class what strategies they used to solve the problem.  **Adding and Subtracting with Hundreds Board:**  Remind students they’ve been practicing ways to add and subtract numbers. Tell students that today they will practice adding and subtracting numbers using the hundreds board. Ask students how they think the following math story can be solved using a Hundreds Board:  “Mark has 5 stickers and Jacob has 12. How many stickers do they have together?”  Facilitate discussion of strategies by asking questions and having students restate ideas. Record students’ strategies on board. If not suggested, show students how to add the tens first (counting up) then the ones (counting right).  Distribute Cardstock “*Hundreds Board*” to students. Ask student pairs to work together to solve this math story using the Hundreds Board:  *“Mary has 11 pencils and Jennifer has 19. How many more does Mary need to have the same amount as Jennifer?*”  Ask students to share their strategies for solving this problem with the class. Facilitate discussion by asking questions and asking students to restate ideas. If not suggested, show students how to subtract the tens first (counting down) then the ones (counting left). Write the following equations on the board. Ask student pairs to work together to solve them using the hundreds board. Walk around to facilitate discussions and to model use of the hundreds board as a math tool.  6+12=□ 16-7=□ 3+□=11 15-8=□ 4+5=□  Call on volunteers to solve problems for the whole group. List the strategies used. | | | | | | **Assessment (formative/summative)**  2 OA 2 Task: Facts with Doubles Plus One  <http://commoncoretasks.wikispaces.com/>  **Doubles Poem**  1+1 is 2. My friend lives at the zoo.  2+2 is 4. He eats dinner on the floor.  3+3 is 6. He sleeps curled up on sticks.  4+4 is 8. He always wakes up late.  5+5 is 10. He's getting loud again.  6+6 is 12. He's in a tree all by himself.  7+7 is 14. He's playing and cavorting.  8+8 is 16. My buddy isn't very clean.  9+9 is 18. At dinner time he's waiting.  10 +10 is 20. He likes bananas plenty. | |
| **Thursday**  **Subject Integration:** | **Whole Group**  Review doubles. Have large number cards 1 – 9. Put the cards face down on the table. On the count of three, hold up the top card. Each player doubles the number in their head. The first to say the correct answer keeps the card. Change the game: Have students call out the double + 1 answer instead!  **Adding/Subtracting with Hundreds Board:** Play a game called “Racing Along” using a hundreds boards on the Smartboard or a large 100’s chart. Working within 20, teacher calls out problems with ample pauses between numbers and operators ("8... plus... 5... next: 12... minus ...7!"), allowing students to move their finger or a pointer accordingly. Give volunteers a chance to show alternative ways they solved the problem to review strategies learned. | | | | | | **Assessment(formative/summative)**  2 OA 2 Task: Facts with Doubles Plus Two  <http://commoncoretasks.wikispaces.com/> | |
| **Friday** | **Teacher will set up review centers containing activities from the last two weeks; this will give the teacher additional time to do formative/summative assessments as needed.** | | | | | |  | |
| **Reflection-Checking for Understanding**  Students in need of remediation:  Action/Activities: | | | **Reflection-Checking for Understanding**  Students on target:  Action/Activities: | | | | **Reflection-Checking for Understanding**  Students who need enrichment:  Action/Activities**:** | |